ORIGINAL

EX PARTE OR LATE FILED

April 3, 2003

Ms. Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, Southwest
12th Street Lobby, TW-A325
Washington D.C. 20554

Re. Ex Parte Comments to Cellular Telecommunications & Internet Association Ex Parte Presentation of February 25. 2003.

WT Document No. 01-309

Dear Ms. Dortch,

These comments are made in response to the Cellular Telecommunications & Internet Association Ex Parte Presentation of February 25. 2003.

In the presentation made by Jennifer Manner it was stated that Hearing Aid compatibiliy (HAC) and interference are different issues. I disagree with this statement as hearing aids can not be HAC as long as the cellular telephone generates interference that overpowers the desired voice signal of the telephone when using T-coils.

The interference is. first. a result of pickup, demodulation, and amplification of the hearing aids amplifier and is present whether the hearing aid is using the microphone or telecoil. Because of this the wireless industry is placing the entire blame on the hearing aid industry and insisting upon RF Immunity in the hearing aid. The hearing aid industry has made great strides in eliminating this source of interference, claiming a 15 dB improvement in RF immunity. The second source of interference is the magnetic field generated by the pulsing (or varying) battery current of digital cellular telephones. I have not found that in any of the comments submitted by the wireless industry that this source of interference is acknowledged. Of course, in order for the telephone to be HAC the telecoil must be sensitive to magnetic fields. Until this source of interference to the T-coil (telecoil) is eliminated it will be impossible for digital cellular telephones to be HAC.

CTIA is correct in saying that requiring internal coupling will not solve the interference problem but since the hearing aid industry has made great improvement in RF immunity. it is time that the wireless industry did their share in solving this interference problem. Solving the magnetic interference to the T-coil is it's responsibility and can not be solved in the hearing aid.

There is a solution to the magnetic interference to the telecoil as I have shown both to Mr. Barnes of CTIA and FCC personnel. I made a demonstration of the technique to FCC personnel in April of 2002 which was reported in an EX Parte letter to the FCC which can be found in the FCC's E-Filing. Note: due to a typing error when sending the comment to the FCC it is necessary to use the lower case c in company in order to read the comment.

If the wireless industry truly wants to participate in a solution, as stated by Ms. Manner, to the interference problem which prevents digital cellular telephoness from being HAC, the industry should at least investigate the solution outlined in my several comments to the FCC regarding HAC. Thes comments can be found by going to the E-Filing pages of the FCC.

I am offering my services to the wireless industry at no charge as I want to be able to use a digital cellular telephone with out resorting to expensive and cumbersome attachments as suggested in the CTIA presentation. We, who are hard of hearing and wear hearing aids; would like to be able to use digital cellular telephones like we use wireline telephones with out expensive and

cumbersome attachments, It is posssible to do so with the solutions available i.e., RF immune hearing aids, and digital cellular telephones free of magnetic interference to the T-coil from the telephone's battery and associated wiring.

Further comments on the CTIA presentation follow. It is stated that wireline phones use speakers that are designed to provide T-Coil compatibility wih hearing aids equipped with a T-coil. There is no reason why such a speaker could not be used in wireless telephones. Analog cellular phones provide the necessary inductive coupling so there is no reason why digital cellular telephones could not use the same type of coupling!

The presentation's statement that interference refers to the noise generated in a hearing aid when the source of RF energy such as from wireless phones, computer monitors, and flourescent lights, indicates a lack of understanding of the difference between RF interference and magnetic interference. Noise generated in the heating aid by RF energy of wireless phones is, in fact. due to a lack of immunity to RF energy in the hearing aid, but the source of interference caused by computer monitors and flourscent lights is magnetic interference and not due to RF energy. In general, magnetic interference due to other devices than digital cellular telephones can be eliminated by moving away from the source or turning off the source, Of course this can not be done when using a cellular telephone as the phone must be close to the hearing aid.

It should be said that the RF energy generated by the telephone can not be decreased without having an adverse affect on the ability of the phone to communicate with the cell towers.

It is not understood what is meant by the statement that" the HAC standard is designed for wireline telephone and that use of this standard for wireless phones will not result in the desired outcome". The audio magnetic field necessary for inductive coupling of a wireline telephones is the same for wireless phones as ii is for wireline telephone.

CTIA states HAC can provide coupling only to 20% of hearing aids that have T-coils but this is probably more than was present when Congress passed the HAC Act of 1988. so this is not a valid reason for not revoking wireless telephone's exemption to the HAC Act The number of wireless telephones was very small at that time and the exemption of wireless telephones from the HAC Act was justified but now the number of digital cellular telephones is huge and many wireline subscribers are giving up wireline telephones and using only cellular telephones. Hard of hearing persons are not given this option because of the interference and thus is discriminatory.

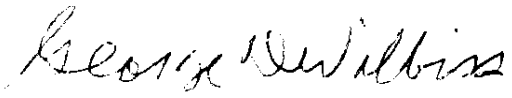
The statement that HAC connot fix the problem of interference is true but as stated above digital Cellular Telephones cannot be HAC until the magnetic field interfering with the T-coils (telecoils) is eliminated. The term HAC requires that the phone be useable with telecoil coupling which cannot be done until this magnetic source of interference is removed. Once the magnetic field generated by the telephone's battery and associated wiring is eliminated, and hearing aids are made RF immune cellular telephones will be HAC. Using the solution submitted in my comments and bypassing the current "hodge podge" circuit traces in the telephones by use of a small coaxial cable could result in successful retrofitting into phones already on the market at a reasonably small cost. Regardless, this is not a valid reason for not making changes so that future phones are HAC. The cost to make the modifications necessary is small compared to the cost of producing a digital cellular telephone. Many changes are currently being made to phones which far exceed the cost of making them HAC such as text, television displays, and television cameras.

A thorough engineering analysis of Starkey Laboratories report of a test of a directional antenna indicates that use of such an antenna in digital cellular telephones would allow use of presently manufacfured hearing aids without RF interference. The use of directional antennas will not decrease the ability of a cellular telephone to communicate with a cell tower but the tests of Starkey Laboratories indicates they actually enhances this ability.

For all the reasons stated above it is requested that the exemption of wireless telephones to the HAC Act of 1988 be revoked and the wireless industry be required to make digital cellular telephones truly HAC for all phones manufactured after a reasonable time to allow the installations of the solutions since simple and inexpensive solutions do exist and could be installed

in a very short time.

Sincerely



George DeVilbiss
3056 Hazelton St.
Falls Church, VA 22044
Phone703534 1681
Faz 702 534 5568
geodv@erols.com
or geodvl@covad.net